



Association of Public Health Laboratories
May 25, 2004 • Atlanta, GA

Laboratory Information Management System Requirements

Session 4-C



Session

- Public Health Laboratory Requirements for Information Management Systems
- Collaborative Approach to Public Health Laboratory PHIN Compliant LIMS Design
- Commercial LIMS Implementation in a Complex Public Health Laboratory at NCID/CDC
- Public Health LIMS Functional Implementation



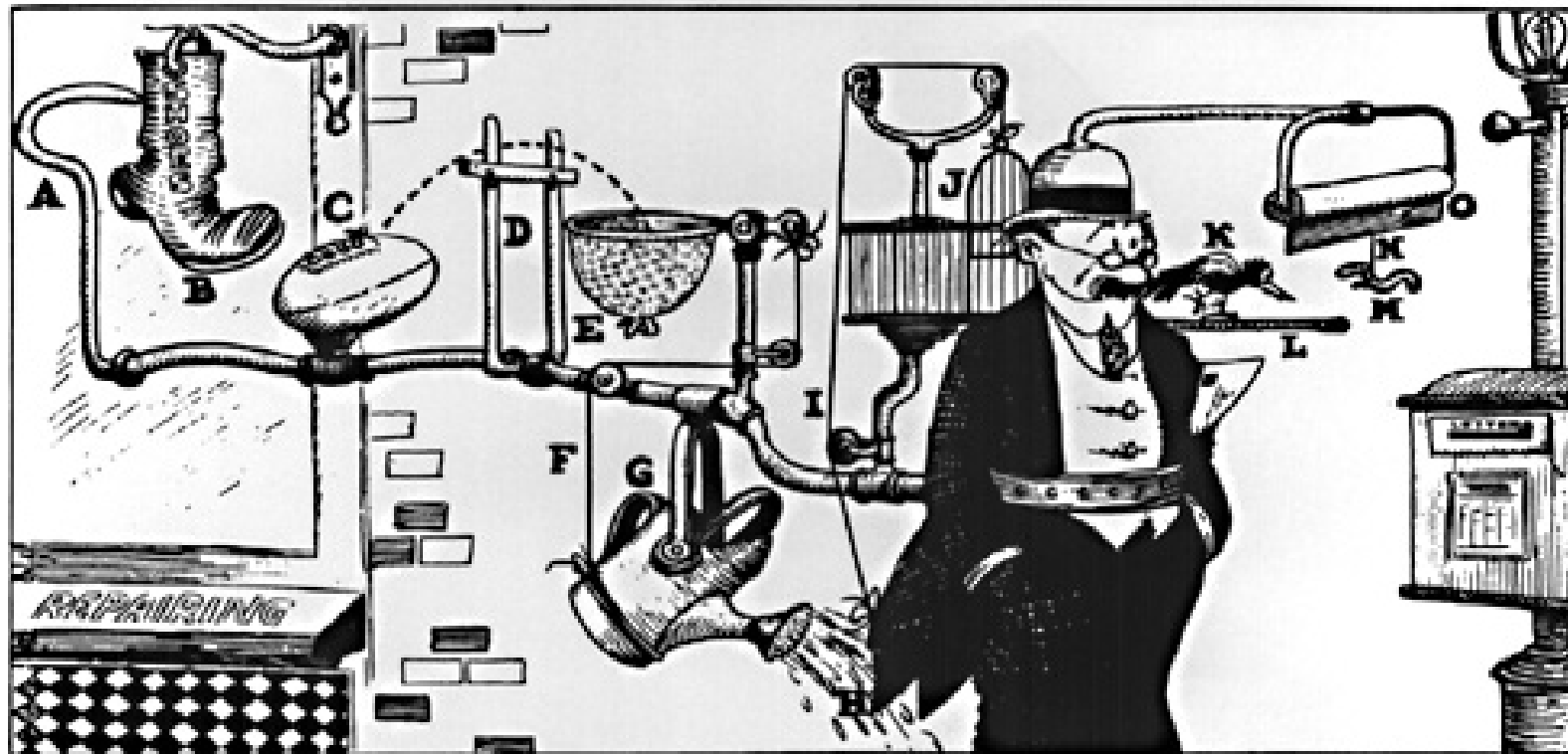
Why Requirements?

- In recent years -
- Public Health Laboratories (PHLs) overwhelmed – anthrax, SARS, monkeypox, West Nile
- Inadequate LIMS
- Inability to electronically exchange information



APHL - LIMS 2003 Survey

- 43 States responded
- States may have multiple LIMS running in one PH laboratory (74% of labs are employing more than 1 system)
- Respondents have had their LIMS in place for an average of 7.63 years
- 58% of States seeking to replace their LIMS within a year



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Why Requirements?

- **The essential step in developing or acquiring a LIMS**
- **Enables PHLs to develop or acquire a system that meets users' needs.**
- **Enables PHL enterprise view of all lab functions, information needs, and interdependencies of information across business functions.**

Why Requirements?

- **Enables PHLs to match system requirements to commercial vendors' software products.**
- **Enables PHLs to meet interoperability standards.**



Collaborative Project

APHL, the Public Health Informatics Institute (PHII) and CDC participated in a project (Sept 2002- Sept 2003) to determine commonalities among PHLs' requirements specifications.

Sixteen state PHLs contributed expertise and experience.



The End Result

- Sixteen business processes that provide framework for defining workflows and outputs for LIMS.
- A roadmap for helping PHLs.
- A tool for assessing LIMS products measured against a complete set of requirements and needs.
- A basis for public health labs to issue comprehensive RFP's for LIMS solutions.
- Re-affirmation of the similarity of PHL function and needs.

Business Processes

1. Laboratory Test Processing (Clinical and Environmental)

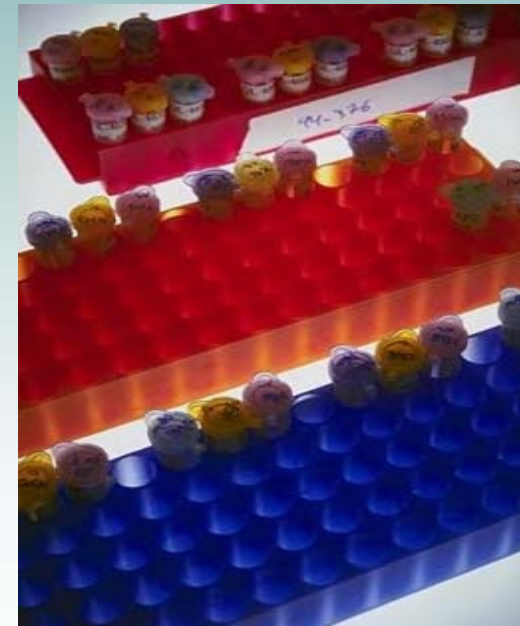
2. Test Scheduling

3. Proactive Sample/Specimen Collection (Prescheduled Tests)



Business Processes

- 4. Specimen and Sample Tracking/Chain of Custody**
- 5. Media, Reagent, Stains, Controls for Analytical testing**



Business Processes

6. Inventory Control Including Kits & Forms Management

7. General Laboratory Reporting

8. Statistical Analysis and Surveillance





Business Processes

- 9. Billing for Laboratory Services**
- 10. Contract and Grant Management**
- 11. Training, Education and Resource Management**
- 12. Lab Certifications/Licensing**

Business Processes

13. Customer Concerns/Suggestions

14. Quality Control (QC) and Quality Assurance (QA)

15. Lab Safety & Accident Investigation

16. Laboratory Mutual Assistance



Requirements for Public Health Laboratory Information Management Systems

- **The APHL publication describing all 16 business processes and associated objectives is available in pdf and hard copy by contacting APHL.**